

Applicant : Jacob Bar-Tana
Serial No.: Not Yet Known
Filed : Herewith
Page 3

Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

1-28. (canceled)

29. A method for the treatment of Syndrome-X which comprises orally administering to a human subject a therapeutically effective amount of a xenobiotic fatty acid compound of the formula $R\text{-COOH}$ or a salt, ester or amide thereof, wherein R designates a saturated or unsaturated alkyl chain of 10-24 carbon atoms, one or more of which may be replaced by a heteroatom, where one or more said carbon or heteroatom chain members optionally forms part of a ring, and where said chain is optionally substituted by a hydrocarbyl radical, heterocyclyl radical, lower alkoxy, hydroxyl-substituted lower alkyl, hydroxyl, carboxyl, halogen, phenyl, or (hydroxyl-, lower alkyl, lower alkoxy, lower alkenyl or lower alkynyl)-substituted phenyl $C_3\text{-}C_7$ cycloalkyl or (hydroxyl-, lower alkyl, lower alkoxy, lower alkenyl or lower alkynyl)-substituted $C_3\text{-}C_7$ cycloalkyl wherein said compound is capable of being endogenously converted to its respective coenzyme A thioester, $RCOSCoA$.

Applicant : Jacob Bar-Tana
Serial No.: Not Yet Known
Filed : Herewith
Page 4

30. The method of claim 29, wherein R is selected from the group consisting of ω -carboxyl and ω -hydroxyl chains.
31. The method of claim 29, wherein RCOOH is a saturated or non-saturated long chain fatty acid.
32. The method of claim 29, wherein RCOOH is selected from the group consisting of:
 - 1,16 Hexadecanedioic acid
 - 1,18 Octadecanedioic acid
 - 2,2,15,15-tetramethyl-hexadecane-1,16-dioic acid
 - 2,2,17,17-tetramethyl-octadecane-1,18-dioic acid
 - 3,3,14,14-tetramethyl-hexadecane-1,16-dioic acid
 - 3,3,16,16-tetramethyl-octadecane-1,18-dioic acid
 - 4,4,13,13-tetramethyl-hexadecane-1,16-dioic acid
 - 4,4,15,15-tetramethyl-octadecane-1,18-dioic acid.
33. The method of claim 29, wherein RCOOH is 3,3,14,14-tetramethyl-hexadecane-1,16-dioic acid.
34. The method of claim 29, wherein RCOOH is 3,3,16,16-tetramethyl-octadecane-1,18-dioic acid.
35. The method of claim 29, wherein RCOOH is selected from the group consisting of:
 - 16-hydroxy-hexadecanoic acid
 - 18-hydroxy-octadecanoic acid
 - 16-hydroxy-2,2-dimethyl-hexadecanoic acid
 - 18-hydroxy-2,2-dimethyl-octadecanoic acid
 - 16-hydroxy-3,3-dimethyl-hexadecanoic acid

Applicant : Jacob Bar-Tana
Serial No.: Not Yet Known
Filed : Herewith
Page 5

18-hydroxy-3,3-dimethyl-octadecanoic acid
16-hydroxy-4,4-dimethyl-hexadecanoic acid
18-hydroxy-4,4-dimethyl-octadecanoic acid.

36. A method for the treatment of dyslipoproteinemia which comprises orally administering to a human subject a therapeutically effective amount of a xenobiotic fatty acid compound of the formula R-COOH or a salt, ester or amide thereof, wherein R designates a saturated or unsaturated alkyl chain of 10-24 carbon atoms, one or more of which may be replaced by a heteroatom, where one or more said carbon or heteroatom chain members optionally forms part of a ring, and where said chain is optionally substituted by a hydrocarbyl radical, heterocyclyl radical, lower alkoxy, hydroxyl-substituted lower alkyl, hydroxyl, carboxyl, halogen, phenyl, or (hydroxyl-, lower alkyl, lower alkoxy, lower alkenyl or lower alkynyl)-substituted phenyl C₃-C₇ cycloalkyl or (hydroxyl-, lower alkyl, lower alkoxy, lower alkenyl or lower alkynyl)-substituted C₃-C₇ cycloalkyl wherein said compound is capable of being endogenously converted to its respective coenzyme A thioester, RCOSCoA.
37. The method of claim 36, wherein R is selected from the group consisting of ω -carboxyl and ω -hydroxyl chains.
38. The method of claim 36, wherein RCOOH is a saturated or non-saturated long chain fatty acid.

Applicant : Jacob Bar-Tana
Serial No.: Not Yet Known
Filed : Herewith
Page 6

39. The method of claim 36, wherein RCOOH is selected from the group consisting of:
1,16 Hexadecanedioic acid
1,18 Octadecanedioic acid
2,2,15,15-tetramethyl-hexadecane-1,16-dioic acid
2,2,17,17-tetramethyl-octadecane-1,18-dioic acid
3,3,14,14-tetramethyl-hexadecane-1,16-dioic acid
3,3,16,16-tetramethyl-octadecane-1,18-dioic acid
4,4,13,13-tetramethyl-hexadecane-1,16-dioic acid
4,4,15,15-tetramethyl-octadecane-1,18-dioic acid.
40. The method of claim 36, wherein RCOOH is 3,3,16,16-tetramethyl-octadecane-1,18-dioic acid.
41. The method of claim 36, wherein RCOOH is selected from the group consisting of:
16-hydroxy-hexadecanoic acid
18-hydroxy-octadecanoic acid
16-hydroxy-2,2-dimethyl-hexadecanoic acid
18-hydroxy-2,2-dimethyl-octadecanoic acid
16-hydroxy-3,3-dimethyl-hexadecanoic acid
18-hydroxy-3,3-dimethyl-octadecanoic acid
16-hydroxy-4,4-dimethyl-hexadecanoic acid
18-hydroxy-4,4-dimethyl-octadecanoic acid.
42. A method for lowering plasma levels of triglycerides in a human subject which comprises orally administering to the subject an effective triglyceride lowering amount of a xenobiotic fatty acid compound of the formula R-COOH or a salt, ester or amide thereof, wherein R designates a saturated

Applicant : Jacob Bar-Tana
Serial No.: Not Yet Known
Filed : Herewith
Page 7

or unsaturated alkyl chain of 10-24 carbon atoms, one or more of which may be replaced by a heteroatom, where one or more said carbon or heteroatom chain members optionally forms part of a ring, and where said chain is optionally substituted by a hydrocarbyl radical, heterocyclyl radical, lower alkoxy, hydroxyl-substituted lower alkyl, hydroxyl, carboxyl, halogen, phenyl, or (hydroxyl-, lower alkyl, lower alkoxy, lower alkenyl or lower alkynyl)-substituted phenyl C₃-C₇ cycloalkyl or (hydroxyl-, lower alkyl, lower alkoxy, lower alkenyl or lower alkynyl)-substituted C₃-C₇ cycloalkyl wherein said compound is capable of being endogenously converted to its respective coenzyme A thioester, RCOSCoA.

43. The method of claim 42, wherein the lowering of plasma levels of triglycerides is accompanied by an increase in plasma levels of HDL cholesterol.
44. The method of claim 42, wherein R is selected from the group consisting of ω -carboxyl and ω -hydroxyl chains.
45. The method of claim 42, wherein RCOOH is a saturated or non-saturated long chain fatty acid.
46. The method of claim 42, wherein RCOOH is selected from the group consisting of:
1,16 Hexadecanedioic acid
1,18 Octadecanedioic acid

Applicant : Jacob Bar-Tana
Serial No.: Not Yet Known
Filed : Herewith
Page 8

2,2,15,15-tetramethyl-hexadecane-1,16-dioic acid
2,2,17,17-tetramethyl-octadecane-1,18-dioic acid
3,3,14,14-tetramethyl-hexadecane-1,16-dioic acid
3,3,16,16-tetramethyl-octadecane-1,18-dioic acid
4,4,13,13-tetramethyl-hexadecane-1,16-dioic acid
4,4,15,15-tetramethyl-octadecane-1,18-dioic acid.

47. The method of claim 42, wherein RCOOH is 3,3,16,16-tetramethyl-octadecane-1,18-dioic acid.
48. The method of claim 42, wherein RCOOH is selected from the group consisting of:
16-hydroxy-hexadecanoic acid
18-hydroxy-octadecanoic acid
16-hydroxy-2,2-dimethyl-hexadecanoic acid
18-hydroxy-2,2-dimethyl-octadecanoic acid
16-hydroxy-3,3-dimethyl-hexadecanoic acid
18-hydroxy-3,3-dimethyl-octadecanoic acid
16-hydroxy-4,4-dimethyl-hexadecanoic acid
18-hydroxy-4,4-dimethyl-octadecanoic acid.
49. A method for increasing plasma levels of HDL cholesterol which comprises orally administering to a human subject an effective HDL cholesterol increasing amount of a xenobiotic fatty acid compound of the formula R-COOH or a salt, ester or amide thereof, wherein R designates a saturated or unsaturated alkyl chain of 10-24 carbon atoms, one or more of which may be replaced by a heteroatom, where one or more said carbon or heteroatom chain members optionally forms part of a ring, and where

Applicant : Jacob Bar-Tana
Serial No.: Not Yet Known
Filed : Herewith
Page 9

said chain is optionally substituted by a hydrocarbyl radical, heterocyclyl radical, lower alkoxy, hydroxyl-substituted lower alkyl, hydroxyl, carboxyl, halogen, phenyl, or (hydroxyl-, lower alkyl, lower alkoxy, lower alkenyl or lower alkynyl)-substituted phenyl C₃-C₇ cycloalkyl or (hydroxyl-, lower alkyl, lower alkoxy, lower alkenyl or lower alkynyl)-substituted C₃-C₇ cycloalkyl wherein said compound is capable of being endogenously converted to its respective coenzyme A thioester, RCOSCoA.

50. The method of claim 49, wherein R is selected from the group consisting of ω -carboxyl and ω -hydroxyl chains.
51. The method of claim 49, wherein RCOOH is a saturated or non-saturated long chain fatty acid.
52. The method of claim 49, wherein RCOOH is selected from the group consisting of:
 - 1,16 Hexadecanedioic acid
 - 1,18 Octadecanedioic acid
 - 2,2,15,15-tetramethyl-hexadecane-1,16-dioic acid
 - 2,2,17,17-tetramethyl-octadecane-1,18-dioic acid
 - 3,3,14,14-tetramethyl-hexadecane-1,16-dioic acid
 - 3,3,16,16-tetramethyl-octadecane-1,18-dioic acid
 - 4,4,13,13-tetramethyl-hexadecane-1,16-dioic acid
 - 4,4,15,15-tetramethyl-octadecane-1,18-dioic acid.

Applicant : Jacob Bar-Tana
Serial No.: Not Yet Known
Filed : Herewith
Page 10

53. The method of claim 49, wherein RCOOH is 3,3,16,16-tetramethyl-octadecane-1,18-dioic acid.
54. The method of claim 49, wherein RCOOH is selected from the group consisting of:
- 16-hydroxy-hexadecanoic acid
 - 18-hydroxy-octadecanoic acid
 - 16-hydroxy-2,2-dimethyl-hexadecanoic acid
 - 18-hydroxy-2,2-dimethyl-octadecanoic acid
 - 16-hydroxy-3,3-dimethyl-hexadecanoic acid
 - 18-hydroxy-3,3-dimethyl-octadecanoic acid
 - 16-hydroxy-4,4-dimethyl-hexadecanoic acid
 - 18-hydroxy-4,4-dimethyl-octadecanoic acid.